

BEST AVAILABLE COPY

IN THE CLAIMS:

1. (currently amended) An apparatus for detecting currents in a three-phase power transmission system, said apparatus comprising:

a first detection circuit electrically coupled to a first phase of said three-phase transmission system;

a second detection circuit electrically coupled to a second phase of said three-phase transmission system different than said first phase; and

an event output switch electrically coupled to said first detection circuit and said second detection circuit, said event output switch configured to actuate when a subsynchronous current on at least one of said first phase and said second phase exceeds a pre-selected subsynchronous current setpoint;

wherein said first detection circuit comprises an alternating current analog output and a direct current analog output and said second detection circuit comprises an alternating current analog output and a direct current analog output.

2. (currently amended) An apparatus in accordance with Claim 1 wherein at least one of the first detection circuit and the second detection circuit is electrically coupled to a series capacitor bank.

3. (original) An apparatus in accordance with Claim 1 wherein said event output switch is configured to actuate in less than approximately one second when a subsynchronous current is detected.

4. (original) An apparatus in accordance with Claim 1 wherein said pre-selected subsynchronous current setpoint is between approximately 17% and approximately 67% of a nominal line frequency.

5. (cancelled)

6. (original) An apparatus in accordance with Claim 1 wherein said first detection circuit and said second detection circuit are operable using at least one of a current input and a voltage input.

7. (original) An apparatus in accordance with Claim 6 wherein said first detection circuit and said second detection circuit comprise a jumper switch configured to select at least one of said current input and said voltage input.

8. (original) An apparatus in accordance with Claim 1 wherein said apparatus is operable using at least one of a plurality of line frequencies, a subsynchronous passband, a passband gain, and a variable current range.

9. (currently amended) A series capacitor bank for a three-phase power transmission system, said capacitor bank comprising:

a first detection circuit electrically coupled to a first phase of said three-phase transmission system;

a second detection circuit electrically coupled to second phase of said three-phase transmission system different than said first phase; and

an event output switch electrically coupled to said first detection circuit and said second detection circuit, said event output switch configured to actuate when a subsynchronous current on at least one of said first phase and said second phase exceeds a pre-selected subsynchronous current setpoint;

wherein said first detection circuit and said second detection circuit are operable using at least one of a current input and a voltage input, said first detection circuit and said second detection circuit comprise a jumper switch configured to select at least one of said current input and said voltage input.

10. (original) A series capacitor bank in accordance with Claim 9 wherein said event output switch is configured to actuate in less than approximately one second when a subsynchronous current is detected.

11. (original) A series capacitor bank in accordance with Claim 9 wherein said pre-selected subsynchronous current setpoint is between approximately 15% and approximately 65% of a nominal line frequency.

12. (original) A series capacitor bank in accordance with Claim 9 wherein said first detection circuit comprises an alternating current analog output and a direct current analog output and said second detection circuit comprises an alternating current analog output and a direct current analog output.

13. (cancelled)

14. (cancelled)

15. (currently amended) A three-phase power transmission system, said transmission system comprising:

a series capacitor bank;

a first detection circuit electrically coupled to a first phase of said three-phase transmission system;

a second detection circuit electrically coupled to second phase of said three-phase transmission system different than said first phase; and

an event output switch electrically coupled to said first detection circuit and said second detection circuit, said event output switch configured to actuate when a subsynchronous current on at least one of said first phase and said second phase exceeds a pre-selected subsynchronous current setpoint at said series capacitor bank;

wherein said first detection circuit comprises an alternating current analog output and a direct current analog output and said second detection circuit comprises an alternating current analog output and a direct current analog output.

16. (original) A power transmission system in accordance with Claim 15 wherein said event output switch is configured to actuate in less than approximately one second when a subsynchronous current is detected.

17. (original) A power transmission system in accordance with Claim 15 wherein said pre-selected subsynchronous current setpoint is between approximately 17% and approximately 67% of a nominal line frequency.

18. (cancelled)

19. (original) A power transmission system in accordance with Claim 15 wherein said first detection circuit and said second detection circuit are operable using at least one of a current input and a voltage input.

20. (original) A power transmission system in accordance with Claim 19 wherein said first detection circuit and said second detection circuit comprise a jumper switch configured to select at least one of said current input and said voltage input.

21. (cancelled)

22. (cancelled)

23. (cancelled)

Remarks

The Office Action mailed June 24, 2003, has been carefully reviewed and the foregoing response has been made in consequence thereof. Claims 1-4,6-12,15-17, 19, and 20 are now pending in this application. Claims 5, 13, 14, 18 and 21-23 have been cancelled.